

REMARKS

Status of Claims:

Claims 2-3, 7, 11=12 and 14 have been canceled. Thus, claims 1, 4-6, 8-10, 13 and 15-16 remain for examination.

Prior Art Rejections:

Claims 1-3, 6-7, 10-11 and 13-14 stand rejected under 35 U.S.C. § 103 as obvious over AAPA in view of Kaku, Watanabe and Sourour (WO 99/35763). The examiner recognizes that neither AAPA nor Kaku disclose dividing the data profile into a plurality of data blocks and searching the maximum value of the delay profile at every data block. The examiner further recognizes that Watanabe does not show storing the maximum value of the delay profile. For this latter teaching the examiner points to Sourour, presumably on page 7, lines 2-27 and possibly also on page 12, lines 23-27 and page 13, lines 1-6.

The examiner's rejections are respectfully traversed.

As discussed in the prior amendment, Watanabe discloses dividing the search window into N portions and assigning these N portion to the 1 to N search correlators 3. These N correlators find correlative values using a short integration time for all phases within the divided windows and output the correlative values to the search control section 8. See column 4, lines 9-17. As a result, the correlative values within the entire search window are produced as shown in Fig. 2. Since a short integration time was used in order to shorten the search itself, the correlative values so produced do not suppress interference or noise sufficiently nor do they achieve the accuracy needed to carry out cell judgment. (Column 4, lines 18-23.) The control section 8 rearranges the correlative values in order of electric power and selects multiple phases starting with the one with the maximum power and assigns the selected phases equally to the 1st to Nth correlators. After this assignment, a longer integration time is used, and the 1st to Nth correlators, using the longer integration time, generate correlative values with the needed accuracy to carry out cell judgment on the specified phases. (Column 4, lines 27-31).

Watanabe goes on to explain:

Search control section 8 further rearranges the correlative values obtained in the order of electrical power and selects correlative values by the number of demodulable phases from the top and combines these selected correlative values to obtain the strength of the pilot channel of this base station apparatus. The number of demodulable phases depends on the number of multi-paths that can be combined by demodulation correlator 4 and RAKE combining section 5.

The operation above is repeated by the number of base stations notified to measure the strength of the pilot channels of all peripheral base station apparatuses received from the base station apparatus with which it is communicating.

As shown above, dividing the search window into portions, assigning them to multiple correlators, obtaining correlative values for all phases within the search window, and judging the maximum value eliminate the necessity of setting thresholds, etc., allowing a high-speed cell search. (Column 4, lines 32-49).

It may be seen from the above that Watanabe does NOT teach “keeping the maximum value at every data block to detect the peak from the maximum values searched from the respective data blocks.” The keeping of the maximum value is different from merely searching or finding the maximum value which is taught in Watanabe. As explained in applicant’s specification:

In the multi-path detection circuit 600 according to the first embodiment of this invention, each peak value is stored or preserved at every one of the memory block. With this structure, it is possible to reduce the processing steps (the above repetition times) of retrieving the second and the following peaks and to decrease current consumption. (Emphasis added).

(Applicant’s specification, page 22, lines 17-22).

Thus, when the second iteration for finding the peak is carried out, it is not necessary to again find the maximum values of each peak within each of the data blocks.

With regard the newly cited Sourour reference, applicant can not find any teaching of storing the maximum value at every data block to detect the peak from the maximum values searched from the respective data blocks. The correlation results are stored as explained in the top paragraph of page 7, and a quality value is stored representing a squared error between the correlation values and the weighted, delayed summation of the correlation functions. However, these teachings are not teachings of applicant's claimed limitations of storing each maximum value at every data block as recited. As such is submitted that the PTO has not made out a *prima facie* case of obviousness under the provisions of 35 U.S.C. § 103, and thus applicants claims are patentable over the prior art.

In order to further expedited prosecution of the application, applicant has amended claim 1 to incorporate therein the limitations of claims 2 and 3. Claims 2 and 3 have been canceled. Further, claim 6 has been amended to incorporate therein the limitations of claim 7, and claim 7 has been canceled. Claim 13 has been amended to include therein the limitations of claim 14, and claim 14 has been canceled. These amended claims are deemed to be patentable since the prior art of record fails to show the “**storing each maximum value at every data block to detect the peak from the maximum values searched from the respective data blocks**” (claim 1) and *a fortiori* fails to show the storing step **in combination** with the **masking**, **determining** and **re-executing** steps specifically recited. In this connection, the examiner's had rejected applicant's claim 3 based on lines 1-12 of page 4 of the admitted prior art. However, it is pointed out that this paragraph does not disclose **dividing the search profile into a plurality of blocks** and searching for the maximum value at every data block. Indeed, a disadvantage of this method described in applicant's APA is that

it is required in this method to repeat, over the number of detected peaks, various processes, such as a maximum value search, a removal of t-samples prior and after the peak.

This disadvantage is not present in applicant's invention, since, as previously stated, when the second iteration for finding the peak is carried out, it is not necessary to again find the maximum values of each peak within each of the data blocks. (Applicant's specification, page 22, lines 17-22). The recited step in claim 1 of “re-executing the searching step only

about the specific data block [i.e., the one that includes the previous peak] to detect the following peak” captures this distinction within the claims.

Claims 5 and 13 have similar limitations in reciting:

means for selecting a specific one of the data blocks that includes the peak previously detected; and

control means for making the search means search a following maximum value again **only about the specific block** of the renewed delay profile data

Thus, for the above reasons, it is submitted that independent claims 1, 5 and 13 are patentable over the prior art.

Furthermore, claim 10 has been amended by incorporating therein the limitations of claims 11 and 12, which have been canceled. Thus, claim 10 is essentially the independent version of claim 12 which was indicated as merely objected to by the examiner. Thus, claim 12 is believed to be allowable.

It is thus submitted that all independent claims are patentable over the prior art. Claims dependent therefrom are deemed patentable at least by virtue of their dependency.

Since the amendments made hereto essentially combine the recitations of certain dependent claims into the independent claims from which they formerly depended, it is submitted that no new issues are raised by the instant amendment and that the instant amendment does not require any additional searching.

Conclusions:

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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FOLEY & LARDNER LLP

Customer Number: 22428

Telephone: (202) 672-5407

Facsimile: (202) 672-5399

By 

David A. Blumenthal

Attorney for Applicant

Registration No. 26,257